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STICKING PROBABILITY OF H2 AND HD ON NOBLE METAL  
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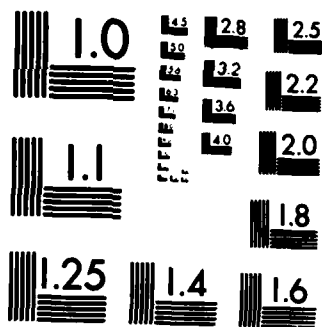
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STICKING PROBABILITY OF  $H_2$  AND HD ON NOBLE METAL SURFACES

by

M.D. Stiles and J.W. Wilkins

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Laboratory of Atomic and Solid State Physics  
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## Sticking Probability of $H_2$ and HD on Noble Metal Surfaces

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One-phonon distorted-wave Born approximation calculations of the energy-dependent phonon-assisted sticking coefficients of  $H_2$  and HD at smooth metal surfaces yield peaks in the sticking coefficient as a function of energy due to selective adsorption resonances, the peaks being strong for HD and weak for  $H_2$ . Furthermore the calculation does not explain the observed<sup>1</sup> dependence of the sticking coefficient of  $H_2$  on the rotational populations.

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